

CERNY, Rudolf

Face and back of standardization. Normalizace 12 no.8:232 Ag '64

1. Zavody Vitezneho unora National Enterprise, Hradec Kralove.

CERNY, R.

CZECHOSLOVAKIA

MARKSMAN, V; HAYDOVA, E; CERNY, R

Institute of Medical Chemistry, Masaryk University, Pilsen -
(for MR.)

Prague, Collection of Czechoslovak Chemical Communications,
No 1, January 1966, pp 139-151

"Sequential arrangement of polymucopeptides. Part 1: Isolation
of terminal amino fragments by oxidation with periodate and
chromatography on aminostyryl-cellulose."

CERNY, Rudolf

Revision of standards and other documentation materials.
Normalizace 13 no.1:15-16 Ja '65.

1. Zavody Vitezneho unora National Enterprise, Hradec
Kralove.

CERNY, Rudolf

Five years of experience in using cable shackles of epoxy resins. Elektrotechnik 19 no.1:20-21 Ja'64.

1. Elektromontazni zavody, Praha.

CERNY, S.

"Education, Individual Study for Power Engineers". p. 117 (ENERGETIKA, Vol. 3, No. 3, March 1959, Praha, Czechoslovakia).

SO: Monthly List of East European Accessions, LC, Vol. 3, No. 5, May 1954, Unclassified.

"Education of Power Engineers." p. 182, Praha, Vol. 3, no. 5, May 1953. "Discussion of the book Lenin on Electrification." p. 183, Praha, Vol. 3, no. 5, May 1953.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

GERRY, S.

"Basic Changes in Education of Power Engineers for Factories." p. 246, Praha, Vol. 3, no. 7, July 1953.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

CERNY, S.

"Soviet Experiences Help Us Fulfill the Goals of the Government Resolution On Power", P. 389, (ENERGETIKA, Vol. 4, No. 9, Sept. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (REAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

CERNY, S.

Development of technical and factory schools. p.196. ENERGETIKA.
(Ministerstvo paliv a energetiky. Hlavni sprave elektraren) Praha
Vol. 5, no. 5, May 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress,
Vol. 4, No. 12, December 1955

CERNY, S.

Assuring operational practice of students according to Soviet experiences. p. 270.
(Energetika, Vol. 6, no. 6, June 1956. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 6,
June 1957. Uncl.

CERNY, S.

Institute of Power Engineering started its activities. p. 327.

ENERGETIKA. Praha, Czechoslovakia. Vol. 9, No. 6, June 1959

Monthly list of East European Accessions. (EEAI) LC, Vol. 8, No. 10
Oct. 1959
Uncl.

CERNY, S.; STARKOVA, B.

"Production of activated carbon and its physical structure."

p. 503 (Chemie, Vol. 10, no. 6, June 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9
September 1958

CERNY, S.

"Active carbons" by G. G. Robovici. Reviewed by S. Cerny. Coll Cz Chem
26 no.10: 0 '61.

SMISHEK, M. [Smisek, M.]; ~~CHERNY, S. [Cerny, S.]~~; MINARZHOVA, I. [Minarova, J.]

Semiautomatic measurement device attached to a volumetric adsorption apparatus. Zhur. fiz. khim. 35 no. 4:939-941 Ap '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut vozdukhotehniki, Chekhoslovakiya.
(Adsorption)

SMISEK, Milan; CERNY, Slavoj; MINAROVA, Jindra

Structural inhomogeneity of charcoal activated by
gaseous agents. Chem prum 12 no.5:237-239 My '62.

1. Vyskumny ustav vzduchotechniky, Praha. 2. Nynější
pracoviště: Ustav fyzikalni chemie, Ceskoslovenska akademie
ved, Praha (for Smisek and Cerny).

CERNY, Slavoj; SMISEK, Milan

Mercury porosimetry. Chem listy 56 no.11:1296-1301 N '62.

1. Ustav fyzikalni chemie, Ceskoslovenska akademie ved, Praha.

SMISEK, Milan; CERNY, Slavoj; MINAROVA, Jindra

**Semiautomatic device for measurement of vapor adsorption
isotherms on volumetrical apparatus. Chem listy 57 no.6:
638-643 Je '63.**

**1. Ustav fyzikalni chemie, Ceskoslovenska akademie ved, Praha
a Vyskumny ustav vazdichotechniky, Praha.**

PONEC, V.; KNOR, Z.; CERNY, J.

Adsorption and catalytic reactions on evaporated metal films. Pt.10.
Coll Cz Chem 29 no.12:3033-3043 D 164.

1. Institute of Physical Chemistry of the Czechoslovak Academy of
Sciences, Prague.

PONEC, V.; KNOR, Z.; CERNY, S.

Adsorption and catalytic reactions on evaporated metal films.
Pt.11. Coll Cz Chem 30 no.1:208-216 Ja '65.

1. Institute of Physical Chemistry of the Czechoslovak Academy
of Sciences, Prague. Submitted April 9, 1964.

FAHRNER, R., inz.; CADEK, A.; POUR, B., inz., dr.; HLUBUCEK, inz.;
PFLEGER, V.; NETUSIL, J.; REISS, L., prof., inz.; KOHOUT,
J.; KRIKA, J.; VLASAK, J.; VLACH, J., inz., dr.; CERNY, St.;
KALDROVIC, P.; JIRASEK, J.; BURES, J.; SCHIFFLER, O., inz.;
LIDICKY, Fr., inz.; BRAUNER, J., inz.

Record of the 1st National Conference of the Czechoslovak
Scientific and Technical Society, Section for Power Engineering,
held in Prague, April 1961. Energetika Cz 11 no.6:Suppl.:
Energetika 11 no.6:1-11 '61.

CERNY, V.

Experiences in chamber shooting and blasting and our railroads. p. 69. (Zeleznice, Praha, Vol. 4, no. 3, Mar. 1954)

SO: Monthly list of East European Accessions (EEAL), LC Vol 4, No. 6, June 1955, Uncl

CERNY, V.

Development of welding during the ten years after the liberation. p. 129.
(Zvaranie, Vol. 4, no. 5, May 1955, Praha.)

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 4,
No. 11, Nov. 1955, Uncl.

CZECHOSLOVAKIA

J. NOVAK and V. CERNY, First Dermatovenereologic Clinic of Medical Faculty of Charles University (I. dermato-venerologicka klinika lekarske fakulty Karlove University) Head (prednosta) Prof Dr J. KONOPIK, and Geophysical Institute of the Czechoslovak Academy of Sciences, Department of Heliogeophysics (Geofyzikalni ustav CSAV, heliogcofyzikalni oddeleni) Head (vedouci) B. BEDNAROVA, PhD; Prague.

"Effect of Pulsed Electromagnetic Field on the Human Body."

Prague, Casopis Lekarů Ceskych, Vol 102, No 18, 5 May 63; pp 496-497.

Abstract : Very brief report of device built in March 1963 at the Clinic. Studies on guinea pigs revealed that latter perceive impulses but do not suffer from them; 20 tests in authors and staff were carried so far, confirming same findings in man. Technical data and schematic diagram of apparatus.

1/1

LABLER, L.; CERNY, V.

On steroids. Pt 84. Coll Cz Chem 28 no. 11:2932-2940 N°63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

DOLEJS, L.; HANUS, V.; CERNY, V.; SORM, F.

On steroids. Pt. 78. Coll Cz Chem 28 no.6:1584-1592
Je '63.

1. Institute of Organic Chemistry and Biochemistry and
Institute of Physical Chemistry, Czechoslovak Academy
of Sciences, Prague.

CERNY, V., inz.

World Symposium of the United Nation Organization on Modern
Methods of Iron and Steel Production for Underdeveloped
Countries in Prague. Kniha listy 18 no.11:761-762 N°63.

CERNY, V., ins.

The 1st National Congress of the Czechoslovak Scientific and Technical Association. Hut listy 16 no.8:593-594 Ag '61.

1. Predseda sekce pro hutnictvi a slevarenstvi, Ceskoslovenska vedecko-technicka spolecnost.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52																									
100 AND 101 TUBES																									
101 AND 102 TUBES																									
103 AND 104 TUBES																									
105 AND 106 TUBES																									
107 AND 108 TUBES																									
109 AND 110 TUBES																									
111 AND 112 TUBES																									
113 AND 114 TUBES																									
115 AND 116 TUBES																									
117 AND 118 TUBES																									
119 AND 120 TUBES																									
121 AND 122 TUBES																									
123 AND 124 TUBES																									
125 AND 126 TUBES																									
127 AND 128 TUBES																									
129 AND 130 TUBES																									
131 AND 132 TUBES																									
133 AND 134 TUBES																									
135 AND 136 TUBES																									
137 AND 138 TUBES																									
139 AND 140 TUBES																									
141 AND 142 TUBES																									
143 AND 144 TUBES																									
145 AND 146 TUBES																									
147 AND 148 TUBES																									
149 AND 150 TUBES																									
151 AND 152 TUBES																									
153 AND 154 TUBES																									
155 AND 156 TUBES																									
157 AND 158 TUBES																									
159 AND 160 TUBES																									
161 AND 162 TUBES																									
163 AND 164 TUBES																									
165 AND 166 TUBES																									
167 AND 168 TUBES																									
169 AND 170 TUBES																									
171 AND 172 TUBES																									
173 AND 174 TUBES																									
175 AND 176 TUBES																									
177 AND 178 TUBES																									
179 AND 180 TUBES																									
181 AND 182 TUBES																									
183 AND 184 TUBES																									
185 AND 186 TUBES																									
187 AND 188 TUBES																									
189 AND 190 TUBES																									
191 AND 192 TUBES																									
193 AND 194 TUBES																									
195 AND 196 TUBES																									
197 AND 198 TUBES																									
199 AND 200 TUBES																									

CERNY, Václav

co

14

Water supply in Czechoslovakia with a special view to watering systems arranged in groups. VÁCLAV CERNÝ. Trans. 1st Intern. Congr. Sanit. Tech. and Communal Hyg., Prague, U. S. Pub. Health Rep. Abstracts 10, W. 44 (Aug. 30, 1930).—A common water system for several municipalities and supported jointly by them is recommended as a practical solution to the problem of providing a satisfactory supply of drinking water in the country.

C. R. FALLERS

ASB-56A METALLURGICAL LITERATURE CLASSIFICATION

100000 1000000

100000 1000000

100000 1000000

CERNY, V.

"Selection of Correct Speed for Tractors in Plowing." p. 328,
(MECHANISACE ZEMEDELSTVI, Vol. 4, No. 17, Sept. 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.

CERNY, V.

Good plowing, a basis for future crops. p. 448.
MECHANISACE ZEMEDELSTVI. Vol. 4, No. 23, Dec. 1954

80: Monthly East European Accession (EEAL), LC, Vol. 4, No. 9, Sept. 1955 Uncl.

CERNY, V.

Good preparation of soil, a basis of higher yields. p. 108
MECHANISACE ZEMEDELSTVI. Vol. 5, No. 6, Mar. 1955.

SO: Monthly East European Accession (EEAL), LC, Vol. 4, No. 9, Sept. 1955 Uncl.

CERNY, V.

Maps of large country estates in agricultural and forest archives. p. 91

KARTOGRAFICKY PŘEHLED, Vol. 9, No. 2, June 1955

(Československá akademie věd. Kabinet pro kartografii) Praha

SOURCE: East European Accessions List Vol. 4, No. 11 November 1955

KASAL, A.; POLAKOVA, A.; KAMERNITZKY, A. V. [Kamernitskiy, A. V.];
LABLER, L.; CERNY, V.

On steroids. Pt. 76. Coll Cz Chem 28 no. 5: 1189-1195
My '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague (for Kasal, Labler and Cerny).
2. Institute of Natural Drugs, Prague (for Polakova).
3. Institute of Organic Chemistry, Academy of Sciences U.S.S.R, Moscow (for Kamernitsky)

CERNY, V.; DOLEJS, L.; SORM, F.

On steroids. Pt. 87. Coll Cz chem 29 no.7:1591-1597 J1 '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Sciences, Prague.

~~L 8290-66~~

ACC NR: AT5027851

SOURCE CODE: CZ/2503/65/000/011/0045/0050

AUTHOR: Chernyy, V. -- Cerny, V.; Fabian, V.; Gayek, O. -- Hajek, O.; Pokornyy, Z. -- Pokorny, Z.

ORG: Research Institute of Mathematical Machines, Prague (Issledovatel'skiy institut matematicheskikh mashin)

TITLE: A small computer MSP

SOURCE: Ceskoslovenska akademie ved. Vyzkumny ustav matematickych stroju. Stroje na zpracovani informaci, no. 11, 1965, 45-50

TOPIC TAGS: computer, solid state computer, computer design, computer logic, computer circuit

ABSTRACT: The prototype of a small MSP universal decimal computer was built at the Research Institute of Mathematical Machines (Issledovatel'skiy institut matematicheskikh mashin) in Prague and tested by means of simple programs. The computer utilizes the first version of a set of transistorized logic elements developed for the EPOS 2 computer (the set is made of easily available but not fully satisfactory parts). The elements operate with a 1-Mc synchronization pulse frequency. The second unit under study will utilize a new version of the set of elements having an increased reliability. The computer contains approximately 5000 transistors. The electronic components (including the memory) are contained within a 3.5 x 0.5 x 2.5 m cabinet, and consume 1 kw of power. The machine translates the universal

Card 1/2

L 8290-66

ACC NR: AT5027851

ALGOL-60 language into its own machine language. Orig. art. has: 2 formulas.

SUB CODE: DP / SUBM DATE: 29Feb64 / OTH REF: 002

CC
Card 2/2

KASAL, A.; CERNY, V.; SORM, F.

On steroids. Pt.89. Coll Cz Chem 30 no.2:472-480 F '65.

1. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague. Submitted June 23, 1964. 2. Advisory Board Chairman (for Sorm).

CERNY, V.

Chemotherapeutic possibilities in bone tumors. Acta chir. orthop. traum. Cech. 32 no.3:230-234 Je '65.

1. Oddeleni experimentalnej terapie Vyskumneho ustavu onkologickeho v Bratislave (veduci odd. MUDr. RNDr. A. Winkler, CSc.).

Metals ✓ Treatment of stainless waste with oxygen in open-hearth furnace. V. Černý and Zdenko Zdeněk. *Hutnické Listy* 10, 579-83 (1955).—A large quantity of stainless waste makes necessary its metallurgical treatment. A method is described in which steel waste containing Cr-Ni and Cr-Ni-Mo is added to the open-hearth furnace. The results of melts carried out according to this method show that the steel treated with described method can be rolled easily and that its corrosion resistance is no worse than that of stainless steel. Petr Schneider

2

CERNY, V., ins.

Direct-current welding machine with selenium rectifiers.
Nova technika 2 no.4:110 Ap '57.

CERNY, V.

The next tasks of our metallurgic industry. p.481.
(Hutnicke Listy, Vol. 12, No. 6, June 1957, Brno, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

CERNY , V.

Tenth anniversary of the activities of the Welding Research Institute. p.257.

ZVARANIE. (Ministerstvo hutneho prumyslu a rudnych bani a Ministerstvo
strojareustva)
Bratislava, Estonia
Vol. 8, no. 9, Sept. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 11
Nov. 1959
Uncl.

Z/032/60/010/012/008/009
E073/E335

AUTHOR: Černý, V.

TITLE: Applications of Sintered Corundum in Engineering

PERIODICAL: Strojírnoství, 1960, Vol. 10, No. 12,
pp. 944 - 946

TEXT: The author gives some basic information on sintered corundum. The alumina from which sintered corundum is produced must be very finely ground ($2-10 \mu$). A mineraliser (metal oxides or salts) is then introduced which decomposes into the appropriate oxide in quantities of 0.2 - 5% on applying high temperatures. In contrast to powder metallurgy, oxide ceramics can be manufactured by any current method applied in the manufacture of ceramics; also, they can be cast. The most current method is pressing of the powder mass into metal moulds, applying pressures of up to $2\,000 \text{ kg/cm}^2$. The influence of the pressure applied to the presslings (kg/cm^2) on the specific gravity (g/cm^3) is plotted in Fig. 1. The service life of the Card ~~1/8~~

Z/032/60/010/012/008/009
E073/E335

Applications of Sintered Corundum in Engineering

metallic moulds is much shorter than in porcelain production (10 000 to 20 000 presslings, as compared with 15 000 for porcelain). Therefore, these techniques are economical only in some cases. It is also possible to produce semi-finished presslings in the form of cylinders, prisms, plates, etc., sinter these partially at low temperature and then give them the final shape by mechanical working. Corundum is sintered in the temperature range 1 600 - 1 900 °C in an oxidation atmosphere. The sintering is the most important part of the manufacturing technology and together with the type and quantity of the mineraliser it has the greatest influence on the quality of the product. The graph, Fig. 2, shows the influence of the sintering temperature, °C, on the hardness H_{R2} of sintered corundum for a certain

constant quantity of various mineralisers (curves from top to bottom - MgO, talc Fe_2O_3 and TiO_2). The microstructure

Card ~~2/8~~

Z/032/60/010/012/008/009
E073/E335

Applications of Sintered Corundum in Engineering

also has a great influence. The final colour of the concentrated corundum has no influence on its quality. The average properties of sintered corundum measured for specimens of various origins and applications were as follows:

Specific gravity - 3.7 to 3.95 g/cm³;

Hardness (Moh's scale) - 9;

Hardness H_{Ra} - 85 to 91

Hardness H_v (10 kg) 1800 to 2100

Compression strength - 30 000 kg/cm²

Tensile strength - 2200 to 2700 kg/cm²

Bending strength - 2500 to 1000 kg/cm²

Elasticity modulus - 3.3 to 3.8 x 10⁶ kg/cm²

Thermal expansion between 0 and 300 °C - 6.5 to 7.2x10⁻⁶

Softening point - 1700 to 1900 °C.

Card 3/8

Z/032/60/010/012/008/009
E073/E335

Applications of Sintered Corundum in Engineering

Fig. 3 shows the compression strength (kg/cm^2) of sintered corundum as a function of the temperature, $^{\circ}\text{C}$. Fig. 4 shows a comparison of the tensile strength of concentrated corundum (— curve) and of steel (----- line). A comparison was made of the hardness H_v and the resistance to abrasion measured by the Zeiss-Mackensen method. This consists of directing onto the material to be tested a jet of corundum grains, size No. 30 (total volume 28 cm^3) using a nozzle of 5 mm diameter and pressure of 1.5 atm, then measuring the depth of the erosion caused by the grains. The following results were obtained:

Card 4/8

Z/032/60/010/012/008/009
E073/E335

Applications of Sintered Corundum in Engineering

Material	H _v	Depth of erosion, mm
Sintered corundum Safir S25	2000	0.02
Sintered carbide H2	2000	0.01
Molten basalt	900	0.92
Steel ČSN 12 050	800	0.02
Hard porcelain	720	1.20
Glass	550	2.13

In considering the use of sintered corundum it is necessary to bear in mind that its bending strength is low and it is brittle. The shrinkage during sintering is 15-30% and therefore components with sizes exceeding 100 mm in diameter, 150 mm in height, cannot be manufactured. The geometrical shape cannot be guaranteed with an accuracy higher than

Card 5/8

Z/032/60/010/012/008/009
E073/E335

Applications of Sintered Corundum in Engineering

+ 1%. Grinding is difficult but possible by using free silicon carbide grains or wheels of silicon carbide, boron carbide and diamond grains. Sintered corundum can also be drilled and machined by ultrasonics. Corundum can be joined to metal either by mechanical clamping or by sticking with epoxide resins; it can also be metallised and brazed but this is relatively complicated and expensive. Photographs are included of some components manufactured from sintered corundum. There are 8 figures, 2 tables and 3 references: 1 Czech and 2 non-Czech.

ASSOCIATION: Karborundum, n.p., Benátky n. Jiz.

Card 6/8

CERNY, V., inz.; PUNCOCHAR, Z., inz.; KECLIK, V., inz.; SEFC, J., inz.
JENICEK, L.; HRBEK, A.

Informations on metallurgy. Hut listy 16 no.2:147-151 F '61.

1. Ceskoslovenska akademie ved (for Cerny).

BECVAR, J.; JENICEK, L.; PUNCOCHAR, Z., inz.; CERNY, V., inz.; CHVATAL, inz.

Information on metallurgy. Hut listy 16 no.10:753-760 0
'61.

CERNY, Vaclav, ins.

Conference on iron sponge production organized by the Institute of Metallurgy of the Czechoslovak Academy of Sciences. Hut listy 17 no.1:63 Ja '62.

1. Hutnický ústav Československé akademie věd.

BORES, B., dr., inz.; CERNY, V., inz.; TEINDL, J.; PANT, P., inz.;
KREMER, R.; PETROLIK, Miroslav, inz.; REDR, M.

Informations on metallurgy. Hut listy 17 no.8:598-608
Ag '62.

HRBEK, A.; CERNY, V., inz.; PUNCOCHAR, Z., inz.; BECVAR, J., inz.; KECLIK, V.,
inz.; TICHOPADOVA, E., inz.; KREMER, R., inz.; ZIDEK, M., inz.;
TEINDL, J.; SESTAK, B., inz.

Information on metallurgy. Rut listy 17 no.12:887-902 D '62.

~~CERNY, V., inz.~~ MALIK, Jiri, inz.; MALY, V., inz., dr.; PROTIVA, K., inz.;
JICINSKY, J., inz., dr.; BECVAR, J., inz.; PETR, J., inz.

Information on metallurgy. Hut listy 18 no.1:57-68 Ja '63.

TRAJKOV, Stevo, inz., C.Sc.; CERNY, Vaclav, inz.

Treating low-grade manganese ores by sulfidation roasting. Hut listy
18 no.4:254-261 Ap '63.

1. Vyskumný ústav uslechtilých oceli, Praha.

TRAJKOV, Stevo, inz., ScC.; CERNY, Vaclav, inz.

Theory of processes of low-grade manganese ore treatment. But
listy 18 no.5:338-342 My '63.

1. Vyzkumny ustav uslechtilych oceli, Praha.

CERNY, V., ins.

National Conference on the Metallurgy Section of the Czechoslovak
Scientific Technical Society. Hut listy 18 no.6:451 Je '63.

CERNY, Vaclav, inz.

National conference on blast furnaces. Hut listy 18 no.9:
680-682 S'63.

CERNY, V., inz.

World symposium of the United Nations Organization on the use of modern technical methods in the iron and steel metallurgy in under-developed countries. Hut listy 19 no.1:65-69 Ja'64.

L 34225-66 EWP(t)/ETI IJP(c) JD

ACC NR: AP6026065

SOURCE CODE: CZ/0034/65/000/012/0842/0850

AUTHOR: Bernart, Eduard; Cerny, Vaclav

ORG: United Steel Works, Kladno (Spojens ocelarny)

TITLE: Use of protective slags in casting killed steels

SOURCE: Hutnicka listy, no. 12, 1965, 842-850

TOPIC TAGS: slag, metal casting, metallurgic process, powder metallurgy, cast steel

ABSTRACT: Occurrence of casting defects in the bottom casting process of killed steel is usually prevented by using ingot mold dressings, and maintaining the correct casting temperature and rate. Recently protective slags with melting points around 200°C have gained wide use; these slags limit the heat loss and prevent oxidation of the metal surface. The use of these slags in powder form is easier than using them as a liquid. Slags containing graphite melt only partially and the slag film is relatively thin; 1.5 - 2 kg of such a slag powder is required per ton of steel produced; without graphite the amount is 3-4 kg. In the United Steelworks at Kladno briquettes of such slags have been used since 1962. The process improved the steel grades, reduced the number of rejects, and the consumption of molds. Orig. art. has: 11 figures and 7 tables. [Based on authors' Eng. abstr.] [JPRS: 34,272]

SUB CODE: 11 / SUBM DATE: none / SOV REF: 002 / OTH REF: 001

Card 1/1 82

UDC: 621.746 669.046.581 669.141.241.2

CERNY, V; SORM, F.

"Steroids. IV. New Method for Preparation of 3-Hydroxyetienic- (5) acid from 3-Acetoxy-17-Ketoandrostande-(5)." P. 407
(COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK CHEKHOSLOVATSKIKH KHEMICHESKIKH RABOT. Vol. 18, No. 3, June 1953-Praha, Czech.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, April 1955, Uncl.

CERNY, V.

SOM, F.; LABLER, L.; CERNY, V.

Steroids. Part 6. 3-dimethylamino derivatives of steroids [in Russian with summary in English]. Sbor.Chekh.khim.rab. 18 no.6:842-853 D '53. (MLRA 7:6)

1. Department of Natural Products, Institute of Organic Chemistry,
Czechoslovak Academy of Science, Prague. (Steroids)

CERNY VACEK

Steroids. X. Dimethylamino derivatives of allo-pregnans. III. Jiska, Václav Cerný, and František Šorm (Inst. Org. Chem., Czech Acad. Sci., Prague). Collection Czechoslov. Chem. Commun. 19, 551-8 (1954) (in English). See C.A. 49, 338d. R. J. C.

C Z E CH

Steroids. XII. Determination of the configuration of 3-dimethylamino derivatives of cholestane. Ludvík Lábiš, Václav Cerný, and František Šorm (Czech. Akademie věd, Prague). Chem. Listy 48, 1053-55; Collection Czechoslov. Chem. Commun. 19, 1240-57 (1954) (in English); cf. C.A. 49, 355a. —Previously prepd. 3-dimethylamincholestane (I) was proved to have 3 β -configuration. Cholestanone (8 g.) in 250 ml. 98% EtOH treated at room temp. with 48 g. KCN and 51 ml. AcOH, pouring the mixt. (after 6 hrs.) into 1 l. H₂O, extg. the sepd. solid cholestanone cyanohydrin with AcOEt-CHCl₃, washing the ext. with H₂O, 5% HCl, and H₂O, and evapg. the soln. in vacuo at 40° yielded 6.7 g. cyanohydrin which was dried azeotropically and dehydrated by refluxing 4 hrs. with 45 ml. C₆H₅N and 5 ml. POCl₃. The crude 3-cyano-2(or 3)cholestene (5.47 g.) m. 128-30°. [α]_D 77°, obtained by pouring the dehydrated mixt. into H₂O and by extg. of the mixt. with Et₂O. Hydrogenation of 5.6 g. unsatd. nitrile in dioxane over 5% Pd-CaCO₃ at 10° and 748 mm. gave 3.7 g. 3 β -cyanocholestane (II), m. 149.5-51° (from EtOH). Distg. II (0.95 g.) with a mixt. of 3.2 g. NaOH, 5 ml. H₂O, and 52 ml. MeO-CH₂CH₂OH until the temp. rose to 125°, refluxing the mixt. 7 hrs., pptg. the Na salt with equal amt. of Et₂O, decomp. the aq. suspension of the salt with 15% HCl, and extg. the free acid (III) with Et₂O gave 820 mg. crude and 765 mg. (pure).

Černý, Václav

CZECHOSLOVAKIA/Organic Chemistry. Natural Substances
and Their Synthetic Analogues.

E-3

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26970.

Author : Černý, Václav.

Inst :

Title : Steroids. XXI. Separation of Tigogenine
from Yucca Filamentosa L.

Orig Pub: Českosl. farmac., 1955, 4, No. 10, 508 - 509.

Abstract: The method of separation of tigenine (I)
from Yucca filamentosa (II) is described. The
residue after distilling off the alcohol ex-
tract from 100 g of leaves of II is dissolved
in 200 ml of 50%-ual alcohol, the solution is
washed with benzene (6 x 150), the benzene
solution is extracted with 300 ml of 50%-ual
alcohol and the combined aqueous-alcohol

Card 1/2

Cerny, Václav
CZECHOSLOVAKIA/Organic Chemistry. Natural Substances E-3
and Their Synthetic Analogues.

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26968.

Author : Lábler, Ludovík, Černý, Václav; Šorma, František.

Inst :

Title : Steroids. XIX. Proof of Structural Connection
between Holarrhimine and Conessine.

Orig Pub: Sb. chekosl. khim. rabot, 1955, 20, No. 6,
1484 - 1489; Chem. listy, 1955, 49, No. 9,
1389 - 1394.

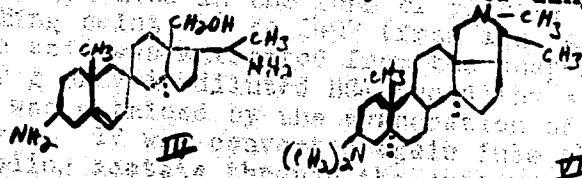
Abstract: It was shown by the conversion of dihydrotetra-
methylholarrhimine (I) into derivatives of co-
nessine that holarrhimine (III) has a steroid
skeleton with a 3 β -amino group. This experi-
mentally proved the assumption (see Siddiqui S.,
Pros. Ind. Acad., 1936, A3, 249; RZhKhim, 1954,

Card 1/5

CZECHOSLOVAKIA/Organic Chemistry. Natural Substances and Their Synthetic Analogues. E-3

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26968.

44694) of the structural closeness of II and III. 1.03 g of chlorohydrate of dihydrocenes-



sinemonomethylchloride (IV) was received from 800 mg of I (melting point 209 to 210°,

$[\alpha]_D^{20} \pm 10^\circ$ (chloroform)) by boiling 1 hour with 15 ml of SOCl₂. IV was converted into a quaternary base with Ag₂O (of 2 g of AgNO₃)

Card 2/5

CZECHOSLOVAKIA/Organic Chemistry. Natural Substances E-3
and Their Synthetic Analogues.

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26968

benzene extracts 164 mg of 5,6-dihydroconessimethine (VI), melting point 64 to 65° (from aqu. acetone), and ether extracts 155 mg of dihydroconessine (VII), melting point 107° (from ace-

tone), $[\alpha]_D^{20} + 51.8^\circ$ (c 3.3, in chloroform). 805 mg of n-toluene sulfonate of monomethyldihydroconessine (VIII), melting point 218 to 221°

(from acetone-CH₃OH), $[\alpha]_D^{20} + 23^\circ$ (c 2.6; in CH₃OH, is obtained after leaving 1 g of I staying in 80 ml of pyridine with 490 mg of n-toluene-sulforchloride for 12 hours, following evaporation in vacuum until dry, neutralization of the aqueous solution of the residue with 500 mg of

Card 4/5

CZECHOSLOVAKIA/ Human and Animal Physiology (Normal and
Pathological).. Internal Secretion. General Problems.

T-9

Abs Jour : Ref Zhur - Biol., No 11, 1958, 51029

Author : Cerny, V.

Inst : -

Title : Steroid Hormones.

Orig Pub : Chemotherapeutika. I. Farmac. sympos., Praha, 1956, 105-
111.

Abstract : No abstract.

Card 1/1

Steroids. XXIV. Structure of holarrhimin. Vachek, Karel, and Frantisek Sorm (Czechoslovakia, Prague). *Chem. Listy* 50, 1123-33 (1956); cf. C.A., 50, 15571c. — *Desoxydihydrotetramethylholarrhimine* (I) prepd. from 3 β ,20 α -bis(dimethylamino)-19-oxoallopregnane (II) was found to be identical with 3 β ,20 α -bis(dimethylamino)-allopregnane (I) prepd. either from 3 β -acetoxy-20-oxoallopregnane (IV), or from 3 β -acetoxy-20-oxoallopregnane (IV). Heating 250 mg. II with 550 mg. 80% NH_4H_2O , 8.5 ml. $BzOH$, and 240 mg. Na 32 hrs. at 200–110° under N in a sealed tube, dilg. the mixt. with H_2O , extg. with Et_2O , and chromatographing the ext. in C_6H_6 soln. over 6 g. Al_2O_3 gave, by C_6H_6 elution, 90 mg. oil, from which was obtained 45 mg. crst. I, m. 123–4° (from Me_2CO), $[\alpha]_D^{25}$ 26°. The compd. is dimorphous; the other form, isolated from another crst., m. 108–9°, $[\alpha]_D^{25}$ 24°. It can be transformed to the first form by seeding the soln. in Me_2CO . Treating 4.23 g. II, m. 142–4°, with 1 g. $NH_4OH.HCl$ in 8 ml. pyridine, adding 17 ml. pyridine, allowing to stand overnight, dilg. the mixt. with H_2O , and extg. with Et_2O gave 4.25 g. crst. of II, m. 194–7°, $[\alpha]_D^{25}$ 16°. Portionwise reduction of 5.97 g. II oxime with 40 g. Na in 495 ml. $EtOH$ at 145–10° (45 min.), dilg. of the mixt. with H_2O , steam-distn. of the $EtOH$, and ether extg. gave 4.55 g. crude amine which was heated 4 hrs. on the steam-bath with 24 ml. HCO_2H and 30 ml. 40% CH_3O . The soln. was dilg. with 4 vols. of H_2O , filtered, alkaliized with NH_4OH , extl. with Et_2O and the ext. acetylated with 25 ml. Ac_2O and 30 ml. C_6H_5N overnight at room temp. Alkaliization of the dil. soln. with NH_4OH , extn. with Et_2O , and chromatography over 120 g. Al_2O_3 yielded, by petr. ether elution, 20% 3 β -acetoxy-20 α -dimethylaminoallopregnane (Va), m. 101.1–2.5° (from Me_2CO and Et_2O), $[\alpha]_D^{25}$ 1°, and (by petr. ether and benzene elution), 5% 3 β -acetoxy-20 α -dimethylaminoallopregnane (Vb), m. 150–60° (from Et_2O and Me_2CO), $[\alpha]_D^{25}$ 12°. Refining 920 mg. Va with 110 mg. K_2CO_3 in 70 ml. $MeOH$, 5 ml. C_6H_6 , and 4 ml. H_2O 2 hrs., crspg. the mixt., dilg. with H_2O , and extg. with

ČERNÝ, VACLAV; Lábek, LUDVÍK, ...

Et_2O gave 877 mg. β -hydroxy-20 α -dimethylaminoallopregnane (VIa), m. 178.5-8° (from Me_2CO), $[\alpha]_D^{25} 12.5^\circ$. Oxidation of 877 mg. VIa in 30 ml. AcOH with 300 mg. CrO_3 in 2 ml. H_2O at room temp. overnight, dilg. of the mixt. with ice, alkalizing with NH_4OH , and extg. with Et_2O gave 457 mg. 3-iso-20 α -dimethylaminoallopregnane (VIIa), m. 160-60° (from Me_2CO), $[\alpha]_D^{25} 34^\circ$. Allowing a mixt. of 690 mg. VIIa, 490 mg. $\text{NH}_4\text{OH} \cdot \text{HCl}$, and 30 ml. $\text{C}_2\text{H}_5\text{N}$ to stand overnight at room temp. 2 days, dilg. the mixt. with H_2O , alkalizing with NH_4OH , and extg. with Et_2O gave 230 mg. VIIa oxime, m. 240-4° (from EtOH). Adding in the course of 5 hrs. at 120° 1.25 g. Na to 255 mg. VIIa oxime in 18 ml. AmOH , dilg. the soln. with ice, acidifying with 2N H_2SO_4 , steam distg. the AmOH , extg. the soln. with Et_2O , sepg. the Et_2O layer, evapg. the Et_2O dissolved in the aq. layer with steam, alkalizing the soln. with NH_4OH , extg. the base with Et_2O , evapg. the ext., heating the residue (250 mg.) 5 min. on the steam bath with 140 mg. $p\text{-O}_2\text{NC}_6\text{H}_4\text{CHO}$, decomp. the resulting crystals (218 mg.) by heating with 20 ml. 2N H_2SO_4 , removing the $p\text{-O}_2\text{NC}_6\text{H}_4\text{CHO}$ with Et_2O , alkalizing the aq. layer with NH_4OH , extg. the base with Et_2O , evapg. the ext., heating the residue (148 mg.) 4 hrs. at 100° with 4.5 ml. 40% CH_3O and 3.6 ml. HCO_2H , dilg. the mixt. with 4 vols. H_2O , filtering, alkalizing with NH_4OH , and extg. with Et_2O gave 90 mg. β ,20 β -bis(dimethylamino)allopregnane (VIII), m. 123.5-4.5° (from Me_2CO), $[\alpha]_D^{25} +17^\circ$. Sapon. of Vb (247 mg.) with 33 mg. K_2CO_3 in 1 ml. H_2O and 16.5 ml. EtOH gave 180 mg. β -hydroxy-20 α -dimethylaminoallopregnane (IX), m. 170-1.5°, $[\alpha]_D^{25} 25.5^\circ$. The same product, m. 172°, $[\alpha]_D^{25} 25^\circ$, was obtained from III as follows: treating 1 g. III, m. 183°, with 15 ml. SOCl_2 , dissolving the crude chloride of III, m. 125-6°, in 24 ml. Me_2CO , adding a soln. of 590 mg. NaN_3 in 2.4 ml. H_2O with ice-cooling, dilg. the mixt. after 20 min. with 60 ml. ice-water,

2/6

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring
Substances and Their Synthetic Analogs.

G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43485.

Author : Schwarz Vladimir, Cerny Vaclav, Sorn Eratisek.

Inst :

Title : On Steroids. XXX. Preparation of 3 β -Acetoxy-16 α -Hydroxy-Allo-Ethianic Acid.

Orig Pub: Chem. listy, 1957, No 7, 1362-1366.

Abstr: Coll. Czechoslov. Chem. Commun., 1958, 23, ~~no 5~~, 946-945.

Abstract: Description of the synthesis of 3 α -acetoxy-16 α -hydroxy-allo-ethianic acid (I), starting from $\Delta^{5,16}$ -pregnadienol-3 β -one-20, by consecutive epoxidation, reduction, introduction of OH-group in position 21, and oxidation with HIO_4 . By hydrogenation of $\Delta^{5,16}$ -16 α , 17 α -epoxypregnenol-3 β -one-20 in alcohol and dioxane over Pd/CaCO_3 , and

Card : 1/5

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring
Substances and Their Synthetic Analogs.

G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43485.

subsequent acetylation of the crude product by the action of $(\text{CH}_3\text{CO})_2\text{O}$ in $\text{C}_5\text{H}_5\text{N}$, is obtained the acetate of 16α , 17α -epoxy-allo-pregnanol-3 β -one-20 (II), yield 96%, MP $185-186^\circ$ (from CH_3OH). The latter is stirred for 16 hours with $\text{Cr}(\text{CH}_3\text{COO})_2$ in aqueous CH_3COOH , in an atmosphere of N_2 , and after chromatography on Al_2O_3 there is isolated 3-acetate-of allo-pregnandiol-3 β , 16α -one-20 (III), yield 67%, MP $184-185^\circ$, $[\alpha]_D^{25} +59.7^\circ$ (c 2; chloroform), and the acetate of Δ^16 -pregnenol-3 β -one-20, yield 16.6%, MP $164-165^\circ$. By action of $\text{C}_6\text{H}_5\text{COCl}$ in $\text{C}_5\text{H}_5\text{N}$, at 20° , on III is obtained the benzoate of III, yield 77%, MP $196-197^\circ$ (from CH_3OH), $[\alpha]_D^{25} +28^\circ$ (c 2.2; chloroform), and by the action of $(\text{CH}_3\text{CO})_2\text{O}$

Card : 2/5

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring
Substances and Their Synthetic Analogs.

G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43485.

in C_6H_5N -- the acetate of III, yield 91%, MP 173-174°, $[\alpha]_D^{25} +25^\circ$ (c 2.2; chloroform). II is brominated by action of Br_2 in CCl_4-CH_3COOH mixture, in presence of HBr (gas), at 20°, the unpurified bromide is allowed to stand with NaI in C_6H_6 and alcohol for 36 hours and the product of the reaction is boiled 7 hours in acetone with CH_3COOK , to get the diacetate of 16 α , 17 α -epoxy-allo-pregnandiol-3,21-one-20, yield 80%, MP 149-150°. By reduction of the latter with $Cr(CH_3COO)_3$, analogously to reduction of II, is obtained the 3,21-diacetate of allo-pregnandiol-3,16 α , 21-one-20 (IV), yield 34%, MP 169-170° (from benzene), $[\alpha]_D^{25} +58.5^\circ$ (c 1.7; chloroform); acetate, MP 160-161° (from CH_3OH), $[\alpha]_D^{25} +44^\circ$.

Card : 3/5

51

CZECHOSLOVAKIA/Organic Chemistry. Naturally Occurring
Substances and Their Synthetic Analogs.

G-3

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43485.

(c 1.7; chloroform); benzoate, MP 244-245° (from CH₃OH), $[\alpha]_D^{25} +27.3^\circ$ (c. 1.8; chloroform). By partial hydrolysis of benzoate of IV by action of KHC0₃ in mixture of water, CH₃OH and CHCl₃ (28°, 18 hours) is obtained the 3-acetate, 16-benzoate of allo-pregnantriol-3 β , 16 α , 21-one-20, yield 59%, MP 177-179°, $[\alpha]_D^{25} +33.8^\circ$ (c 1.4; chloroform). Analogously from IV is synthesized the 3-acetate of allo-pregnantriol-3 β , 16 α , 21-one 20 MP 207-209°, $[\alpha]_D^{25} +45^\circ$ (c. 2.4; chloroform), which, on treatment with HIO₄ in aqueous CH₃OH at 20°, gives I, yield 44%, monohydrate, MP 253-255°, $[\alpha]_D^{25} +12.5^\circ$ (c 1.6; acetone); acetate of methyl ester of I,

Card : 4/5

Country : Hungary G-3
Category : Organic Chemistry. Natural Compounds and their
Synthetic Analogues.
Abs. Jour. : Ref. Zhur.-Khimiya No. 6, 1959 19582
Author : Cerny, V.
Institut. : Hungarian Academy of Sciences
Title : Investigation of the Structure of Holarrimine

Orig Pub. : Magyar tud., akad. Kem. tud. oszt. kozl., 1957,
9, No 3, 275-280

Abstract : Paper presented at the Second Congress of
Hungarian Chemists (Budapest, November 1955), concerning the
author's work on determination of the structure of
holarrimine. (Compare RZhKhim, 1957, 44671).
S. Rozenfel'd.

Card: 1/1

CERNY, V. : SORM, F.

"Steroids, XXV. Synthesis of some 16-substituted derivatives of a 3 β 4-hydroxy-allo-pregnan-21-oic acid and 3 β -hydroxyallo-pregnan-17-en-21-oic acid.
In English."

p. 85 (COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS. SBORNIK
CHEKOSLOVAŠKIKH KHMICHESKIKH RABOT. 22-Praha, Czechoslovakia.)
Vol. 22, No. 1, Feb. 1957

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5, May 1958

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their
Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

Author : Labler L., Cerny V.

Inst :

Title : Steroids. XXXIII. Holarredine, a New Alkaloid from the
Bark of the Holarrhena Antidysenterica Wall.

Orig Pub: Chem. listy, 1957, 51, No 12, 2344-2350.

Abstract: By the investigation of holarremine $C_{21}H_{33}ON_4$ (I),
the authors have developed a modified method for
isolating alkaloids, by the help of which method
it was possible to detect in the bark of Holarrhena
antidysenterica in addition to I, N, N, N', N'-
tetramethyl-I and conessin, a new alkaloid named

Card : 1/6

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their
Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

with $n\text{-NO}_2\text{C}_6\text{H}_4\text{CHO}$ in alcohol, part A gave N,N' -bis-(p -nitrobenzylidene)-I, m.p. 275°C . (the mother liquor B) which upon boiling with 2N sulfuric acid and by boiling the separated product with alcohol gave the sulfate of I, m.p. 339°C . The base was separated by the action of ammonia, extracted with chloroform, afterwards with HClO_4 (from chloroform), precipitated with alkali and extracted with ether. Only 0.028% of I was obtained (calculated in respect to the dry bark), m.p. $185\text{-}186^\circ\text{C}$. (from ether), $[\alpha]_D^{20} -11.7$ (c 3.9; chloroform); monopicate m.p. $240\text{-}242^\circ\text{C}$.; dipicate $\text{C}_{22}\text{H}_{24}\text{O}_{12}\text{N}_2 \cdot \text{H}_2\text{O}$, m.p. $148\text{-}153^\circ\text{C}$.; the tetramethyl derivative was identical with the following compounds: O -benzoyl- N,N,N',N' -tetramethylhol-

Card : 3/6

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their
Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

arrymine, m.p. 173-174°C.; O-acetyl-N, N, N', N'-
tetramethylholarrymine, m.p. 139-140°C. by boiling
for 2 hours with methanol solution of NaOH, gives the
tetramethyl I. After concentration of the mother
liquors B, the remainder was dissolved in chloroform,
the base was separated with ammonia and was extracted
with chloroform. With the help of cinnamic acid in
alcohol, the salt was precipitated, from which the base
was again separated by the action of ammonia, which
base was again purified with the help of the salt of
cinnamic acid. After separation by the action of am-
monia, extraction with chloroform, concentration by
evaporation and crystallization from a mixture of
tetrahydrofuran - water, II was obtained, yield 0.026%,

Card : 4/6

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their
Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81782.

m.p. 181-182°C, $[\alpha]_D^{20}$ -23°. The N, N, N', N'-tetra-
methyl-II, $C_{12}H_{16}ON_2$, m.p. 163-164°C, $[\alpha]_D^{20}$ -34
(c 1.97; chloroform) was synthesized by heating II
with formic acid and formaldehyde on water bath
for 4 hours. In the same way part B was methylated,
the product was washed with acetone, mixed with
petroleum ether and filtered by suction. After
crystallization from alcohol, the insoluble part
gave N, N, N', N'-tetramethyl-I, $C_{12}H_{16}ON_2$, m.p.
227-228°C, $[\alpha]_D^{20}$ -34° (c 3.7; chloroform),
yield 0.06%; the product is identical with the
synthetic one. Conessine was obtained from the
petroleum ether solution upon concentration and

Card : 5/6

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and Their
Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81783

Author : Cerny V., Labler L., Sorm F.

Inst :

Title : The Steroids XXXIV. The Structure of Holarrhedine

Orig Pub: Chem. listy, 1957, 51, No 12, 2351-2355.

Abstract: The authors have suggested a structural formula
3 α , 20 α -diamino-18-oxy- Δ^5 -pregnen for
holarrhydyne (I) based on the results of thermal
splitting and leading to the products which were
identical with the products of the splitting of
holarrhymine (II), based on the difference of
corresponding desoxitetramethyl derivatives of I

Card : 1/4

CZECHOSLOVAKIA/Organic Chemistry. Natural Products and
Their Synthetic Analogues.

G-3

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81783.

(c 27), IR spectrum 1714, 2710 cm^{-1} . From the
later product was synthesized 3 α , 20 α -dimethylamin-
 Δ^5 -pregnen, m.p. 148-149.5 C., [α] D - 31° (c 2.6).
The thermal splitting of III and IV was carried out
basically according to the same method: by heating with
 CH_3I in alcohol, with concentration, dissolving in
water addition of Ag_2O , filtration concentration and
heating for 7 minutes up to 195-200°C. The product
was dissolved in ether, washed with water, and the
ether layer was extracted with 5% HCl . From the ether
layer was obtained $\Delta^{3,5}$ -pregnedienoxide-18,20,
 $\text{C}_{27}\text{H}_{30}\text{O}$, m.p. 97-98°C., [α] D -150° (c 1.5). From
the acidified part was obtained 18-oxy-20- α -di-
methylamin- $\Delta^{3,5}$ -pregnadien $\text{C}_{27}\text{H}_{30}\text{ON}$, m.p. 129-130 C.,

Card : 3/4

CZECHOSLOVAKIA/Physical Chemistry - Surface Phenomena.
Adsorption. Chromatography. Ion Exchange.

B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67393

Author : Zuman, Petr; Cerny, Vasilav

Inst : -

Title : Polarography of Steroids. III. Polarographic Reduction of Steroids Containing the Aldehyde Group in Position 18.

Orig Pub : Chem. listy, 1958, 52, No 8, 1468-1473

Abstract : The polarographic behavior of dehydro-5,6-dihydrotetramethylholarrhimine (I), its oxime (II), dehydrotetramethylholarrhimine, and dehydrotetramethylholarrhidine (III) was investigated. These steroids which contain the aldehyde group in position 18 and branched chain in position 17 are reducible within the pH range 7-10.5 to give a single wave of $E_1 \approx -1.65$ which is independent of pH. The fact that E_1 is independent of pH is explained by steric hindrance due to hydration. II is not

Card 1/2

COUNTRY:	: Czechoslovakia	B-12
CATEGORY	:	
ABS. JOUR.	: RZKha., No. 5 1960, No.	17176
AUTHOR	: Zuman, P. and Cerny, V.	
INST.	: Not given	
TITLE	: The Polarography of Steroids. III. The Polarographic Reduction of Steroids Containing the Aldehyde Group in the 18 Position.	
ORIG. PUB.	: Collection Czechoslov Chem Commun, 24, No 6, 1925-1932 (1959)	
ABSTRACT	: No abstract.	

CARD: 1/1

LABLER, L.; SOCH, P.; ^CŠERNÝ, V.

Steroids. XLVI. Partial synthesis of 3,3,20-trimethoxy-18,20-epoxy-5 α - pregnane from dihydroholarrhinine. XLVII. Partial synthesis of 18-benzoylamino-5 -pregnane-3 -OL-20-one from conessine. Coll Cs chem 25 no.12:4010-4021 '59. (KRAI 9:6)

1. Department of Natural Products, Institute of Chemistry, Czechoslovak Academy of Science, Prague.

(Steroids) (Methoxy group) (Holarrhinine)
(Epoxy pregnane) (Amino group) (Pregnanone)
(Conessine) (Benzoyl group)

KASAL, A.; CERNY, V.; SORM, F.

Steroids. XLIX. Preparation of methylester of 18-dimethylamino-3-oxo-5 α -androsterane-17 β -carboxylic acid. Coll Cz chem 25 no.3: 927-933 Mr '60. (EEAI 9:12)

1. Department of Natural Products, Institute of Chemistry, Czechoslovak Academy of Science, Prague.

(Steroids)

(Esters)

(Dimethylaminooxandrostane-carboxylic acid)

CERNY, V.; SORM, F.

Steroids. LII. Preparation and some reactions of 18-amino-5 α -pregnane-3 β ,20 ξ -diol. Coll. Chem 25 no.11:2841-2848 N '60.
(EEAI 10:6)

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

(Steroids) (Amino group) (Pregnanediol)

KASAL, A.; CERNY, V.; SORM, F.

Steroids. LIII. 18-benzoylaminoprogestrone and some of its reactions. Coll Cz Chem 25 no.11:2849-2854 N '60. (EEAI 10:6)

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

(Steroids) (Benzoyl group) (Amino group)
(Progesterone)

CERNY, V.; JOSKA, J.; LABLER, L.

On steroids. LIX. Application of thin layer chromatography without binder for rapid analytical and preparative separation of steroids. Coll Cz. chem 26 no.6:1658-1668 J. '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague.

(Chromatography) (Steroids)

HORA, J. & CERNY, V.

On steroids. Part 62: Δ^4 -methylcholestan-5,11(20)-dien-3 β -ol and a new pathway for preparation of 18-hydroxyprogesterone from conessine. Coll. Cs. Chem. 26 no. 9: 2217-2228. '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

(Steroids) (Conessine) (Progesterone)

CERNY, V.; KASAL, A.

On steroids. Part 69: Preparation of (20R)-20-hydroxy-3-oxo-5 α -pregnan-18-oic acid (18 $\rightarrow$ 20) lactone from 5,6-dihydro-N,N,N',N'-tetramethylholarrhimine. Coll Cz Chem 27 no.12:2765-2770 D '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

HORA, J.; CERNY V.; SORM, F.

CSSR

Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of
Science, Prague

Prague, Collection of Czechoslovak Chemical Communications, No 12, 1962,
pp 2771-2777

"On Steroids. LXX. Cyclopropane Ring Formation on Deamination of 18-Amino
Steroids"

(3)

KASAL, A.; CERNY, V.; SORM, F.

On steroids. Part 71: Mercury acetate dehydrogenation of conanine derivatives. Preparation of 3-substituted lactams derived from 18-methylamino-5 α -etianic acid. Coll Cz Chem 27 no.12:2898-2906 D '62.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

2
KASAL, A.; CERNY, V.; SOBN, P.

CSSR

Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Science, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications, No 2, 1963,
pp 411-420

"On Steroids, LXXIII. Preparation of Some 18-Substituted Steroids of
Androstane Type from Conessins"

(3)

CERNY, V.

4

CZECHOSLOVAKIA

KASAL, A; POLAKOVA, A; KAMERNITZKY, M.V.; LABLER, L; CERNY, V.

Institute of Organic Chemistry and Biochemistry,
Czechoslovak Academy of Science, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 5, 1963, pp 1189-1195

"On Steroids. LXXVI. N³-Methylholarrhimine and N²⁰-
Methylholarrhimine."

CERNY, V.

2

CZECHOSLOVAKIA

DOLEJS, L; HANUS, V; CERNY, V; SORM, F.

1. Institute of Organic Chemistry and Biochemistry; 2. Institute of Physical Chemistry of the Czechoslovak Academy of Sciences, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications,
No 6, 1963, pp 1584-1591

"On Steroids. LXXVIII. Mass Spectra of Holarrhena Alkaloids."

1248
CZECHOSLOVAKIA

LABLER, L; HORA, J; CERNY, V.

Institute of Organic Chemistry and Biochemistry of the
Czechoslovak Academy of Sciences, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications,
No 8, 1963, pp 2015-2020

"On Steroids. OXXIX. Synthesis of 3- α Dimethylamino-
conan-5-ene. Corroboration of the Structure of
Holarrhidine."

KASAL, A.; CERNY, V.; SORM, F.

On steroids. Pt.73. Coll Cs Chem 28 no.2:411-420 F '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

LABLER, L.; HORA, J.; CERNY, V.

On steroids. Pt. 79. Coll Cz Chem 28 no.8:2015-2020 Ag '63.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak
Academy of Sciences, Prague.